

## CLAIMS

What is claimed is:

- 5     1. A method of communicating a diagnostic message from a vehicle, the method comprising:  
            detecting the diagnostic message; and  
            initiating a wireless communication in response to the diagnostic message, the wireless  
            communication initiated by electronic equipment installed in the vehicle.
- 10     2. A method of communicating a diagnostic message according to claim 1, wherein initiating a  
            wireless communication comprises initiating a wireless communication representing the  
            vehicle's location.
- 15     3. A method of communicating a diagnostic message according to claim 1, further comprising  
            notifying an occupant of the vehicle that the diagnostic message has been communicated.
- 20     4. A method of communicating a diagnostic message according to claim 1, wherein initiating a  
            wireless communication comprises initiating a wireless communication representing a  
            diagnostic message from at least one of an engine management system, a chassis  
            management system, a powertrain management system, and an electrical management  
            system.
- 25     5. A method of communicating a diagnostic message according to claim 1, wherein initiating a  
            wireless communication comprises initiating a wireless communication representing  
            maintenance information.
- 30     6. A method of communicating a diagnostic message according to claim 1, wherein initiating a  
            wireless communication comprises commanding a wireless communication device to  
            transmit the wireless communication.

7. A method of communicating a diagnostic message according to claim 1, wherein initiating a wireless communication comprises sending a command from an engine management system to a wireless communication device to transmit the wireless communication.

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8. A method of communicating a diagnostic message according to claim 1, wherein initiating a wireless communication comprises sending a command from a powertrain management system to a wireless communication device to transmit the wireless communication.

10 9. A method of communicating a diagnostic message according to claim 1, wherein initiating a wireless communication comprises sending a command from a chassis management system to a wireless communication device to transmit the wireless communication.

15 10. A method of communicating a diagnostic message according to claim 1, wherein initiating a wireless communication comprises sending a command from an electrical management system to a wireless communication device to transmit the wireless communication.

11. A method of communicating a diagnostic message from a vehicle, the method comprising:

20 detecting the diagnostic message;

requesting to initiate a wireless communication in response to the diagnostic message;

and

initiating the wireless communication, the wireless communication initiated by electronic equipment installed in the vehicle.

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12. A method of communicating a diagnostic message according to claim 11, wherein requesting to initiate a wireless communication comprises requesting if an occupant of the vehicle would like the electronic equipment to initiate the wireless communication.

13. A method of communicating a diagnostic message according to claim 11, further comprising notifying an occupant of the vehicle that the diagnostic message has been communicated.

5        14. A method of communicating a diagnostic message according to claim 11, further comprising communicating with an occupant of the vehicle to schedule an appointment for service.

10        15. A method of communicating a diagnostic message according to claim 11, wherein initiating a wireless communication comprises initiating a wireless communication representing a diagnostic message from at least one of an engine management system, a chassis management system, a powertrain management system, and an electrical management system.

15        16. A method of communicating a diagnostic message according to claim 11, wherein initiating a wireless communication comprises initiating a wireless communication representing maintenance information.

20        17. A method of communicating a diagnostic message according to claim 11, wherein initiating a wireless communication comprises commanding a wireless communication device to transmit the wireless communication.

25        18. A method of returning a rental vehicle to a rental agency facility, comprising:

detecting a location of the rental vehicle proximate to the rental agency facility; and  
initiating a wireless communication representing rental agency information, the wireless communication initiated by electronic equipment installed in the rental vehicle.

19. A method of returning a rental vehicle according to claim 18, wherein initiating a wireless communication comprises initiating a wireless communication representing at least one of mileage, fuel, and a number identifying the rental vehicle.

20. A method of returning a rental vehicle according to claim 18, wherein detecting a location of the rental vehicle comprises detecting the rental vehicle entering the rental agency facility.

21. A method of returning a rental vehicle to a rental agency facility, comprising:

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detecting a location of the rental vehicle;

wirelessly communicating a request to electronic equipment installed in the rental vehicle, the request representing a request for rental agency information; and

10 initiating a wireless communication in response to the request, the wireless communication initiated by the electronic equipment installed in the rental vehicle, the wireless communication representing the requested rental agency information.

22. A method of returning a rental vehicle according to claim 21, wherein initiating a wireless communication comprises initiating a wireless communication representing at least one of mileage, fuel, and a number identifying the rental vehicle.

23. A method of returning a rental vehicle according to claim 21, wherein detecting a location of the rental vehicle comprises detecting the rental vehicle entering the rental agency facility.

**20 24. A vehicle, comprising:**

a powertrain system driving at least one wheel and tire assembly;  
a processor generating a powertrain system diagnostic message; and  
electronic equipment installed in the vehicle, the electronic equipment initiating a  
wireless communication in response to the powertrain system diagnostic message, with the  
wireless communication representing the powertrain system diagnostic message.

25. A vehicle according to claim 24, wherein the processor further generates a chassis system diagnostic message, and the electronic equipment initiates a wireless communication in

response to the chassis system diagnostic message, with the wireless communication representing the chassis system diagnostic message.

26. A vehicle according to claim 24, further comprising a chassis system processor controller, the  
5       chassis system processor controller generating a chassis system diagnostic message, the  
electronic equipment initiating a wireless communication in response to the chassis system  
diagnostic message, with the wireless communication representing the chassis system  
diagnostic message.
- 10      27. A vehicle according to claim 24, wherein the processor also generates an electrical system  
diagnostic message, and the electronic equipment initiates a wireless communication in  
response to the electrical system diagnostic message, with the wireless communication  
representing the electrical system diagnostic message.
- 15      28. A vehicle according to claim 24, further comprising an electrical system processor controller,  
the electrical system processor controller generating an electrical system diagnostic message,  
the electronic equipment initiating a wireless communication in response to the electrical  
system diagnostic message, with the wireless communication representing the electrical  
system diagnostic message.
- 20      29. A vehicle according to claim 24, wherein the processor commands the electronic to initiate  
the wireless communication.
- 25      30. A vehicle according to claim 24, wherein the electronic equipment comprises a cellular  
telephone.
- 30      31. A vehicle according to claim 24, wherein the electronic equipment comprises a satellite  
communication device.
- 30      32. A method of communicating a diagnostic message from a vehicle, the method comprising:

detecting the diagnostic message; and

initiating a wireless communication in response to the diagnostic message, the wireless communication representing the diagnostic message and the vehicle identification number,  
5 the wireless communication initiated by electronic equipment installed in the vehicle, the wireless communication initiated independently of a service diagnostic tool, the wireless communication received by at least one of the vehicle's manufacturer, a customer service center, and a dealership; and

wirelessly communicating an appointment for service to resolve the diagnostic message.

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33. A method of communicating a diagnostic message from a vehicle, the method comprising:

detecting the diagnostic message;

requesting an occupant of the vehicle to permit a wireless communication in response to  
15 the diagnostic message;

delaying the request if not approved, and

initiating a wireless communication when the request is approved, the wireless communication representing the diagnostic message and the vehicle identification number,  
20 the wireless communication initiated by electronic equipment installed in the vehicle, the wireless communication initiated independently of a service diagnostic tool, the wireless communication received by at least one of the vehicle's manufacturer, a customer service center, and a dealership.

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